REMARKS

In the above action claims 9-13 were allowed, claims 2, 3, 17-19 and 21-23 were indicated to contain allowable subject matter and claims 1, 4-8, 14-16 were rejected on a combination of Ward (the also present inventor) USP 2,267,107 ('107) previously applied in view of a newly cited reference to Hoffman et al/Daimler-Chrysler, USP 6,748,917. Regarding Ward '107 standing alone, Applicant herein (Dr. Ward) states categorically that his '107 patent did not teach the invention as set forth in independent claims 1, 20 as originally presented or as presented in amended form herein (or *a fortiori*) on their respective dependent claims.

The rejection of claims in the prior action was based on Applicant's '107 in view of Regeiro USP 5,320,705, assigned to Daimler-Chrysler Corporation. It was shown in Response A herein that Regeiro was not relevant to the present application, and Applicant's '107 patent did not anticipate the new matter in the present application and there was no basis to combine Ward and Regeio. That rejection is now withdrawn.

It is respectfully submitted now that the present action's new combination of '107 with Hoffman et al. is also inappropriate for three reasons:

First: the Hoffman et al disclosures relates to a gasoline engine having direct (fuel) injection. While Hoffman et al. disclose a control unit 20 which controls operation of spark plugs 7, 7', i.e. when or how they are to be fired, it is within the context of a direct injection engine that the spark plugs are fired, and are selected for firing as a function of load and rpm of the IC engine, to be fired when the fuel spray is optimized for ignition. On the other hand, the present application depends on air-fuel mixture flow to determine ignition.

Second: the invention of the present application for firing of the plugs relates principally to air-flow, and not to fuel injection, and speed of the burn depends on burn rate which is determined by the number of plugs fired. This is evident from the present specificationl at p. 4, ll. 15-21:

> "FIG. 2 is a variant of the combustion chamber of FIG. 1 with asymmetrically located spark plugs to improve the knock rating of the engine so that the engine can be operated with a compression ratio closer to 13:1 than 10:1. At

> wide open throttle where the mixture is preferably 15:1 for gasoline, the burn may be too fast and cause engine harshness or knocking. By firing one spark plug instead of two, the harshness may be reduced, especially if the spark plug closer to the exhaust plug is fired, so that the last part of the burn occurs at the far side of the intake valve at the minor squish land 105, which cools the end gas."

Third: Re claims for different spark gaps (e.g. 4/1, 4/3, 24, among others) the different levels of squish (air-flow) at the ignition spark sites and different pressures may require different spark gaps, versus the determination being made by the injected fuel characteristics, position, et. in the case of Hoffman et al. Note the present specification's p. 4, ll. 30-34:

> "In addition, with respect to FIG. 2, which may result in differing levels of squish flow at the two spark gaps of the plugs 102a, 102b, different size of spark gaps can be used to accommodate the different flow levels and cylinder pressures to prevent blow-out or non-sparking of the spark at very high flows or pressures, e.g. high speed, high load conditions with minimum ignition timing advance where squish and pressure is maximum."

The air flow condition is the primary determinant of which gap to use.

See, also, p. 9. ll. 10-23, of the specification.

It is therefore respectfully urged (I) that all of claims 1-24 be allowed (including those claims previously allowed or indicated allowable); and (II) that a teleconference be held within the next week in the interest of prompt disposition of this application. Applicant's attorney will call to arrange it.

Please note the applicant's correspondence address has changed as indicated above. A Notice of Customer Number Record Change has been filed and accepted by the PTO on July 24, 2006 for customer 26486.

If other questions remain, please call Applicant's attorney, collect, at the number given above. Please charge any fees associated with claims adjustments to Deposit

Account 03-2410, order no. 6050. A duplicate copy of this page is enclosed for Accounting Branch purposes.

Respectfully submitted,

MICHAEL A.V. WARD, Applicant

Dated: September 12, 2006

By: _____

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